

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1.-30. (Canceled)

31. (Currently Amended) A process for the formation of a phosphate-based glass composites composite, comprising:

providing a first phosphate-based glass having a first surface and a second phosphate-based glass having a second surface,

processing said first and second phosphate-based glass surfaces to provide a bonding surface,

providing a solution containing a phosphorous compound,

applying said phosphorus compound containing solution to at least one of said first and second phosphate-based glass surfaces,

placing said first surface into contact with said second surface, and

retaining said surfaces in contact until said surfaces are joined together while the ~~composite~~ solution cures.

32. (Original) A process as claimed in claim 31, further comprising heating the joined surfaces to a temperature below the glass transition temperature of the first or second phosphate-based glass surface.

33. (Previously Presented) A process as claimed in claim 31, wherein a vacuum is applied while the solution cures.

34. (Original) A process as claimed in claim 31, wherein the process is conducted at about room temperature.

35. (Original) A process as claimed in claim 31, wherein said step of processing said first and second phosphate-based glass surfaces comprises grinding or polishing.

36. (Original) A process as claimed in claim 35, wherein the resulting surface has a surface feature of less than 200 nm.

37. (Original) A process as claimed in claim 31, further comprising, after the step of processing, cleaning said first and second processed surfaces.

38. (Original) A process as claimed in claim 31, wherein pressure is applied to the phosphate-based glass surfaces.

39. (Original) A process as claimed in claim 31, wherein the temperature of the phosphate-based glass surface is gradually raised during the step of retaining.

40.-46. (Canceled)

47. (Previously Presented) A process of claim 31 wherein said solution consists essentially of water and a dissolved phosphorous compound therein.

48. (Previously Presented) A process of claim 31 wherein the process results in an optically transparent joint between the first and second phosphate-based glass surfaces.